

**Amendment to the Claims**

Claims 1, 3, 4, 6-19 and 21-26 remain in the application. Claims 2, 5 and 20 have been canceled.

Applicants have amended independent Claims 1, 17 and 19 to overcome the Examiner's rejection under 35 U.S.C. § 103. Support for this Amendment is found in the specification, for example, at page 8, line 22 through page 9, line 5; and page 10, line 11 through page 11, line 3.

Applicants have amended dependent Claims 3, 4, 6, 7 and 8, accordingly.

Attached hereto is a marked-up version of the changes made to the pending claims by this Amendment. The above Amendment adds no new matter to this Patent Application.

**Claim Rejections - 35 U.S.C. § 103**

The rejection of Claims 1-26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,714,647 ("Shipp, Jr. et al.") and U.S. Patent 5,817,584 ("Singer et al.") is respectfully traversed, particularly in view of the above Amendment and the following remarks.

The present invention as claimed in independent Claim 1 requires a meltblown web having a gradient fiber size structure comprising at least one layer of fine meltblown fibers adjacent at least one layer of coarse meltblown fibers, wherein

adjacent layers of the meltblown web have a mean diameter difference of at least 4.0 microns. Similarly, the present invention as claimed in independent Claims 17 and 19 requires a meltblown web comprising at least one layer of coarse meltblown fibers adjacent at least one layer of fine meltblown fibers, wherein the difference between the mean fiber diameter of the coarse meltblown fibers and the mean fiber diameter of the fine meltblown fibers is at least 4.0 microns.

As set forth in the “Definitions” at pages 5 and 6 of the specification, for example, the term “coarse meltblown fiber” refers to meltblown fibers having an average diameter of at least about 5.0 microns and the term “fine meltblown fibers” refers to meltblown fibers having an average diameter of less than about 5.0 microns.

At paragraph 2 of the Office Action, the Examiner alleges that it is known to use fine fibers having a diameter of from 0.5 to 10 microns and larger fibers having a diameter of greater than 10 microns to make a gradient depth filter, as described in Shipp et al. at Col. 2, line 64 through Col. 3, line 12. However, Shipp et al. discloses that U.S. Patent 3,073,735 issued to Till et al. teaches a process wherein fine plastic fibers are formed on a conveying belt having a diameter of from 0.5 microns to about 10 microns and **staple** length rayon fibers having a diameter of 10 microns and greater on top of the fine plastic fibers. Unlike the present invention, Till et al. does not teach or suggest depositing coarse meltblown fibers onto fine meltblown fibers.

Shipp Jr., et al. discloses a composite depth filter medium comprising layers built up layer by layer progressing from fine fibers on one side of the web to extra coarse fibers on the opposite side of the web. Shipp et al. at Col. 5, lines 59-63. The depth filter medium has two layers of fine fibers, and a layer each of medium, coarse, and extra coarse fibers. As shown in the Example 1 table, adjacent layers of fine and coarse fibers **do not** have a mean diameter difference of at least 4.0 microns, as required by Applicants' claimed invention. Shipp et al. at Col. 6, lines 21-59. Further, as the Examiner states in paragraph 2 of the Office Action, Shipp, Jr. et al. fails to teach sandwiching the meltblown web between two spunbond nonwoven webs.

Shipp Jr., et al. does not teach or suggest a nonwoven fabric laminate including a meltblown web comprising at least one layer of fine meltblown fibers adjacent at least one layer of coarse meltblown fibers, wherein adjacent layers of the meltblown web have a mean diameter difference of at least 4.0 microns, as required by Applicants' claimed invention. The deficiencies of Shipp et al. are not overcome by Singer et al.

Singer et al. discloses a breathing mask fabric having a nonwoven microfiber first web of fibers having an average diameter of between 10 and 25 microns and a microfiber second web of fibers having an average diameter of less than about 10 microns. Singer et al. does not teach or suggest a nonwoven fabric

laminate including a meltblown web comprising at least one layer of fine meltblown fibers adjacent at least one layer of coarse meltblown fibers, wherein adjacent layers of the meltblown web have a mean diameter difference of at least 4.0 microns, as required by Applicants' claimed invention.

Regarding Claims 9, 10, 12 and 13, the Examiner alleges that although the claimed permeability and opacity are not explicitly taught by Singer et al. or EP 0729375, it is reasonable to presume that said limitations would be met by the combination of the two references. Claims 9, 10, 12 and 13 depend from and further limit independent Claim 1, which Applicants believe is patentable for at least the reasons presented above.

Regarding Claims 21-26, the Examiner alleges that it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the SMS composite fabric of Singer et al. and EP 0729375 for the disclosed applications. Claims 21-26 depend from and further limit independent Claim 19, which Applicants believe is patentable for at least the reasons presented above.

Accordingly, Applicants respectfully urge that Shipp Jr., et al. and Singer et al., alone or combination, do not render Applicants' claimed invention obvious in the manner required by 35 U.S.C. § 103(a). Thus, Applicants respectfully request withdrawal of this rejection.



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### CONCLUSION

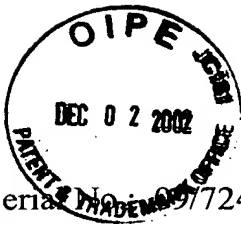
Applicants intend to be fully responsive to the outstanding Office Action. If the Primary Examiner detects any issue that the Primary Examiner believes Applicants have not addressed in this response, Applicants' undersigned attorney requests a telephone interview with the Examiner. The undersigned can be reached at (847) 490-1400.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully request early allowance.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims:**

1. (Amended) A nonwoven fabric laminate, comprising:  
a first nonwoven layer;  
a second nonwoven layer; and  
a meltblown web positioned between the first nonwoven layer and the second nonwoven layer, the meltblown web comprising at least one layer of fine meltblown fibers adjacent at least one layer of coarse meltblown fibers, and having a gradient fiber size structure wherein adjacent layers of the meltblown web have a mean diameter difference of at least 4.0 microns.

Please cancel Claim 2.

3. (Amended) The nonwoven fabric laminate of claim [2] 1, wherein the fine meltblown fibers have an average diameter less than about 5.0 microns.

4. (Amended) The nonwoven fabric laminate of claim [2] 1, wherein the fine meltblown fibers have an average diameter of 0.1 micron to about 4.0 microns.

Please cancel Claim 5.

6. (Amended) The nonwoven fabric laminate of claim [5] 1, wherein the coarse meltblown fibers have an average diameter at least about 5.0 microns.

7. (Amended) The nonwoven fabric laminate of claim [5] 1, wherein the coarse meltblown fibers have an average diameter of about 6.0 microns to about 15 microns.

8. (Amended) The nonwoven fabric laminate of claim 1, wherein the [gradient fiber size structure comprises] at least one layer of fine meltblown fibers is bonded to the at least one layer of coarse meltblown fibers.

17. (Amended) A nonwoven fabric laminate, comprising:  
a first spunbond layer;  
a meltblown web having a first side bonded to a first side of the first spunbond layer, the meltblown web comprising at least one layer of coarse meltblown fibers having a first mean fiber diameter [and] adjacent at least one layer of fine meltblown fibers having a second mean fiber diameter wherein a difference

between the first mean fiber diameter and the second mean fiber diameter is at least 4.0 microns; and

a second spunbond layer having a first side bonded to a second side of the meltblown web.

19. (Amended) A nonwoven fabric laminate, comprising:

a meltblown web having at least one layer of coarse meltblown fibers [and] adjacent at least one layer of fine meltblown fibers, the coarse meltblown fibers having an average diameter of at least about 5 microns and the fine meltblown fibers having an average diameter of less than about 5 microns,

the at least one layer of coarse meltblown fibers and the at least one layer of fine meltblown fibers provide a gradient fiber size structure, wherein the at least one layer of coarse meltblown fibers has a mean fiber diameter at least 4.0 microns greater than a mean fiber diameter of the at least one layer of fine meltblown fibers.

Please cancel Claim 20.